

PATENT SPECIFICATION



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COMPLETE SPECIFICATION.

Improved Bracket for Securing Structural Members Together.

I, PINDER COURTENAY WELLS, a British subject, of 10, Wear Bay Road, Folkestone, in the County of Kent, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

This invention comprises an improved bracket for securing structural members together, and has especial relation to the repair of wooden structures which may have become weakened by rot at the joints or in other ways. For example, in greenhouses or like structures, the wooden sash-bars which support the glass of the roof are liable to rot at the apex, and vertical wooden members forming the sides of the structure frequently decay at their base where they are joined to wooden longitudinal members.

The present invention provides a convenient bracket for strengthening or securing together such members at the joints, and one of the objects of the invention is to provide such a bracket which is adapted for use in a variety of positions and in structures of varying designs.

According to the invention there is employed for securing together structural members an adjustable angle bracket wherein the limbs to be secured to the structural members are connected by a tie or strut, characterised by the said limbs being constituted by separate plates perforated to receive screws and by the tie or strut consisting of two overlapping members one fixed on or integral with each plate and perforated or slotted to receive one or more bolts whereby they may be rigidly secured together to hold the plates at any desired angle. By providing slots or a series of perforations in the overlapping members

it is possible not only to vary the angle at which the limbs of the bracket are set, but also their distance apart and this enables the limbs to be arranged so that they do not interfere with projections, cross-members or other parts of the structure which might otherwise be in the way of the bracket.

Preferably, the contacting faces of the strut or tie-members are roughened and a washer of thin but tough yielding material such as the fabric known under the registered trade mark "ferrodo" fabric is interposed between them to increase their frictional grip.

The invention will now be described with reference to the embodiments illustrated in the accompanying drawings in which—

Figure 1 is a perspective view of one form of bracket made in accordance with the present invention:

Figure 2 is a side elevation of another form, and

Figure 3 is a detail in perspective of a third form.

The bracket illustrated in Figure 1 is intended to be used in the repair of structures, such as greenhouses, and comprises two limbs or back-plates 1, 2 made of flat iron bar and provided with screw holes 3 for fixing to structural members such as sash-bars. Each of the back-plates carries a curved tie or strut 4, 5 riveted at its base into the back-plate about the middle of the length of the latter. The struts are curved about a point approximately at the ends of the back-plates and slotted through their centre for their whole length to receive a fixing bolt 6. The bolt 6 has a square shank under the head where it passes through one of the slots in the member 4 to prevent it from turning. The contacting faces of the struts are roughened as

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at 7, which may be effected by marking with a chisel similarly to the cutting of a file, and a washer 8 of tough material such as that known as "ferrodo" is interposed between the roughened faces 7 around the bolt 6. The roughened faces bite well into the material or the washer, and effectively prevent any slip of the adjustment once the bolt 6 has been tightened. A convenient size for this bracket when used for repairing green-houses is one in which the back-plates 1, 2, are about 9 to 12 inches in length. It will be noted that the back-plates may be spaced apart at the ends, where they approach one another to a considerable extent so that they may escape rotten wood, which usually occurs at the joint.

Figure 2 shows a modified form of the bracket in which the curve of the strut members 4, 5 is reversed as compared with Figure 1, so that the back-plates are tangential to the struts at their point of junction. The struts are each provided with two lugs 9, 10, spaced somewhat apart from one another, both of which pass through the back-plate and are riveted over on the reverse side thus providing a very strong construction.

It will be understood that brackets according to this invention are capable of a wide variety of uses, for example, if made on a suitably small scale, they form convenient and extremely adaptable means for strengthening the joints of furniture, such as chairs, when these become loosened with use. The form shown in Figure 2 is particularly adapted for this purpose as the curve of the arms 4, 5 falls neatly into line with the lines of the members of the furniture which it strengthens.

Figure 3 illustrates another modification in which the curved arms 4 or 5 are formed in one piece with the back-plate. To this end the arm is made of sufficient length and its end portion is cut through to form two feet 11, 12 which

constitute the back-plate are bent in opposite directions and are pierced with 50 holes for the fixing screws.

It will be seen that the bracket according to this invention comprises only two essential elements, namely, the two limbs or back plates, each with its perforated or slotted arm fixed upon it, and these two elements may be secured in any desired relationship by means of a bolt interconnecting the overlapping arms.

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

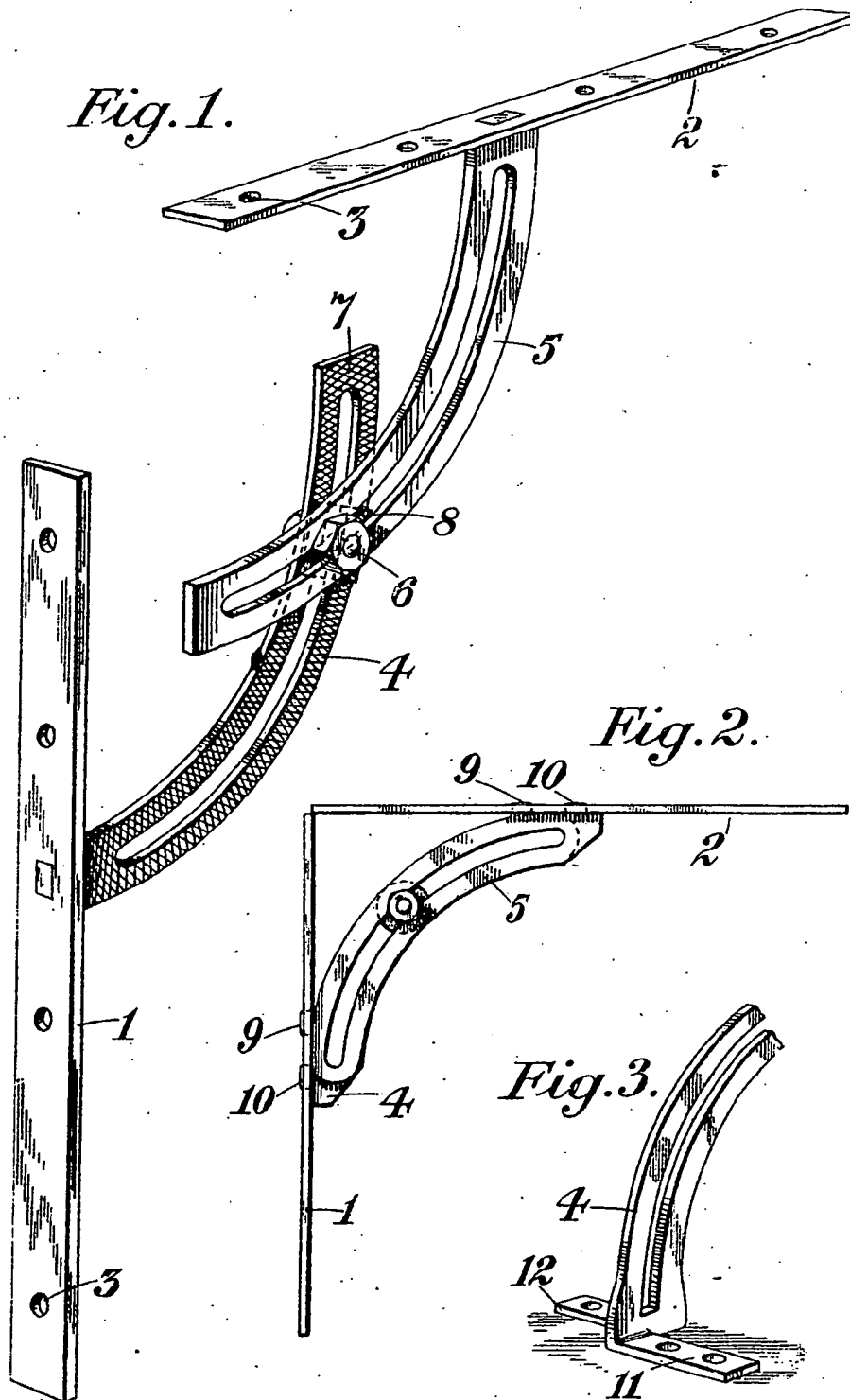
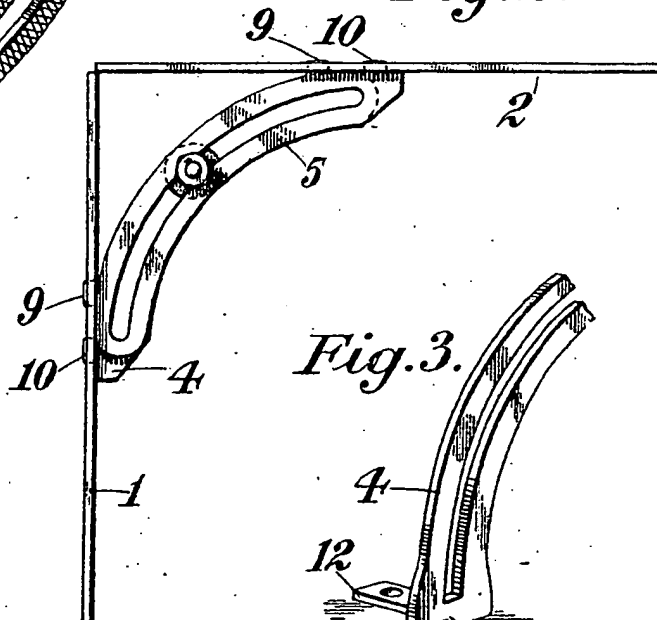
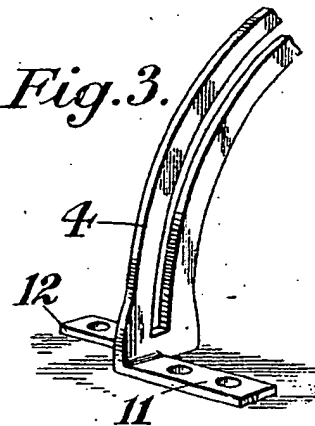
1. For securing together structural members an adjustable angle bracket wherein the limbs to be secured to the structural members are connected by a tie or strut, characterised by the said limbs being constituted by separate plates perforated to receive screws and by the tie or strut consisting of two overlapping members one fixed upon each plate and perforated or slotted to receive one or more bolts whereby they may be rigidly secured together to hold the plates at any desired angle, for the purpose described.

2. A bracket or bracing device as set forth in Claim 1 wherein the contacting faces of the strut or tie members are roughened and a washer of thin but tough yielding material such as the fabric known under the registered trade mark "ferrodo" is interposed between them to increase their frictional grip.

3. A bracket or bracing device substantially as described with reference to Figure 1 or Figure 2 or Figure 3 of the accompanying drawings.

Dated this 20th day of July, 1920.

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Fig. 1.*Fig. 2.**Fig. 3.*

[This Drawing is a reproduction of the Original on a reduced scale.]